

**Diana M. Franklin**  
*Curriculum Vitae*

**Education**

University of California at Davis, Ph.D. in Computer Science, 2002.  
University of Illinois at Urbana-Champaign, MCS. in Computer Science, 1999.  
University of California at Davis, B.S. in Computer Science, 1997.

**Area of Specialization**

Computer Education, Diversity Issues, and Computer Architecture

**Professional Experience**

University of California at Santa Barbara, LSOE, 2007-present,  
100%, Dept of Computer Science, 0% Gevirtz Graduate School of Education  
Director, Center for Computing Education and Diversity, 2008-present  
California Polytechnic State University, San Luis Obispo, Associate Professor, 2007  
California Polytechnic State University, San Luis Obispo, Assistant Professor, 2002-2007  
Seven Pinnacles, consultant, 2006-2007  
Compaq VSSAD group, Research Intern, Summer 2000  
University of California at Davis, Associate Instructor, ECS 154B: Computer Architecture. Fall quarter, 2000  
Lawrence Livermore National Laboratory, Summer Intern, Summer 1997, 1998

**Professional Organizations**

Association for Computing Machinery  
IEEE Computer Society

**TEACHING**

Teaching load as an LSOE is three courses a quarter, but a one-course per quarter release is granted for high service load for ABET coordinator.

Courses taught regularly: Introduction to Computer Systems (CMPSC 64), Computer Architecture (CMPSC 154), Introduction to Computer Architecture and Operating Systems (CMPSC 123), Introduction to Computing (CMPSC 8), Problem Solving with Computers II (CMPSC 24).

**Graduate Degree Committees**

**MS Committees**

| <b>Student</b>              | <b>Year Degree Completed.</b> | <b>Chair/Member</b> | <b>Optional Info (e.g., Current Employment)</b> |
|-----------------------------|-------------------------------|---------------------|---|
| Ayswarya Sundarum (Calpoly) | 2008                          | Member              | CISCO   |
| Charlotte Hill              | (2015)                        | Chair               | Apple   |

**PhD Committees**

| <b>Student</b>            | <b>Year Degree Completed / (expected)</b> | <b>Chair/Member</b> | <b>Optional Info (e.g., Current Employment)</b> |
|---------------------------|---|---------------------|---|
| Bryce Boe                 | 2014                                      | Chair               | AppFolio  |
| Bitia Mazloom             | 2013                                      | Member              | Foothill College                                |
| Hebatallah Saadeldeen     | 2013                                      | Member              | Intel   |
| Susmit Biswas             | 2010                                      | Member              | AMD   |
| Darshan Thaker (UC Davis) | 2008                                      | Member              | KLA Tencor                                      |

**Postdoctoral students supervised**

| <b>Year</b> | <b>Name</b>  |
|-------------|--------------|
| 2015        | Hilary Dwyer |

**Other Teaching Contributions** (course improvements, new courses, honors seminars, etc)

Revised 16-24-32 series with Phillip Conrad  
Developed an automated submission / feedback system for use with programming assignments (2012-13)

Developed closed lab exercises for CMPSC 24 (2011-12)  
 Developed closed lab exercises for CMPSC 30/64 (Intro to Computer Systems) (2009)  
 In conjunction with Phillip Conrad and Michael Costanzo, developed closed lab exercises for CMPSC 8 (Intro to Computing) and introduced pair programming. (2008-09)  
 Led the development of CMPSC 24 (Problem Solving with Computers II) (2008)

## PART II. PROFESSIONAL ACTIVITIES

### Lectures Presented

| Month/Yr      | Title   | Meeting/Place   |
|---------------|---|---|
| March/2015    | Bringing Grades K-5 to the Mainstream of Computer Science Education Panelist                          | Kansas City, KS   |
| October/2014  | <a href="#">KELP CS – A 4 - 6 Grade Design-based Computational Thinking Curriculum</a>                | CUE (Computer Using Educators) Fall 2014 Conference   |
| June/2013     | Gender Diversity in America: Current State and Societal Causes  | Bosphorus University, Turkey  |
| May/2013      | Gender Diversity: Current State, Causes, and What We Can Do   | Raytheon  |
| April/2013    | Women in History: Contributions and their Unlikelihood  | UCSB  |
| April/2010    | 2010 Southern California Forum for Diversity in Graduate Education, Engineering & CS                  | CSU Chanel Islands  |
| October/2009  | 10 Reasons to go to Graduate School at UCSB   | UC San Diego  |
| October/2009  | 10 Reasons to go to Graduate School at UCSB   | Cal Poly, San Luis Obispo   |
| October/2009  | <a href="#">"Multi-Execution: Multicore Caching for Data-Similar Executions"</a>                      | UC Irvine   |
| March/2009    | <a href="#">"Multi-Execution: Multicore Caching for Data-Similar Executions"</a>                      | CS Colloquium, UCSB   |
| February/2009 | <a href="#">"Multi-Execution: Multicore Caching for Data-Similar Executions"</a>                      | University of Maryland, College Park  |
| November/2008 | 10 Reasons to go to Graduate School at UCSB   | UC Merced   |
| June/2008     | Preliminary Experiments on Similar Executions with Reduced Off-Chip Accesses in Multi-core Processors | Workshop on Parallel Execution of Sequential Programs on Multi-core Architectures / Beijing, China. |
| April/2008    | Efficient Fault Tolerance in Multi-media Applications through Selective Instruction Replication       | Workshop on Radiation Effects and Fault Tolerance in Nanometer Technologies / Ischia, Italy         |
| March/2008    | Soft Value Prediction: Exploiting Algorithmic Error Resilience for Low-Cost Data Speculation          | CS Colloquium / UCSB  |
| February/2008 | Gender Differences in Communication: How to Achieve Your Goals in Grad School                         | Women in Computer Science meeting / UCSB  |

### Grants and Contracts

*Total \$2.6M, \$2.1M as PI, \$500K as Co-PI. \$1.3M in Education and \$1.3M in Architecture.*

| Years            | Source          | Title   | Amount        | Prin. Invest.                    |
|------------------|-----------------|---|---------------|----------------------------------|
| 2014             | NSF             | DEPICT-supplement   | \$115K        | PI (1 Co-PI)                     |
| 2014             | NSF             | DEPICT-supplement: REU  | \$16K         | PI (1 Co-PI)                     |
| 2013             | NSF             | DEPICT-supplement: REU  | \$12K         | PI (1 Co-PI)                     |
| <b>2012-2015</b> | <b>NSF</b>      | <b>CER: DEPICT: Developing Elementary (Learning) Progressions to Integrate Computational Thinking</b> | <b>\$600K</b> | <b>PI (1 Co-PI in Education)</b> |
| 2012             | UCSB            | Instructional Improvement Grant   | \$12K         | PI                               |
| 2012             | NSF             | BPC-supplement: REU for Animal Tlatoque   | \$8K          | PI (2 Co-PI)                     |
| <b>2011-2012</b> | <b>Army-ICB</b> | <b>Energy-Efficient Microprocessors using Memristive Neural Networks for Prediction</b>               | <b>\$140K</b> | <b>Co-PI (PI Chong)</b>          |
| 2011             | NSF             | CCF-supplement: REU for Minimal Multithreading  | \$16K         | PI (1 Co-PI)                     |
| <b>2010-2013</b> | <b>NSF</b>      | <b>CCF: Minimal Multithreading - Exploiting Redundancy in Parallel Systems</b>                        | <b>\$500K</b> | <b>PI (1 Co-PI)</b>              |

|           |      |   |        |   |
|-----------|------|---|--------|---|
| 2010-2013 | NSF  | <b>BPC-DP:Animal Tlatoque: A Synergy between Mesoamerican Cultural History and Endangered Species to attract and retain Latina/os and Females in Computer Science</b> | \$533K | PI (2 Co-PIs, 1 in Dept of Chicana/o Studies) |
| 2009-2011 | UCSB | FIRE-Up: Increasing Diversity in Graduate Student Population  |        | PI  |
| 2009      | NSF  | CAREER-supplement: REU  | \$12K  | PI  |
| 2007-2012 | NSF  | <b>CAREER: Horseshoes and Hand Grenades: Exploiting Error Tolerance in Applications</b>   | \$300K | PI  |
| 2007      | NSF  | MRI-supplement: REU   | \$6K   | PI  |
| 2006-2009 | NSF  | <b>MRI: Acquisition of Computing Resources for Management of Reliability through Data Classification and Voltage Overscaling</b>                                      | \$45K  | PI  |
| 2006      | NSF  | NSF-ITR-supplement: REU   | \$12K  | Co-PI   |
| 2003-2007 | NSF  | <b>NSF-ITR: Synchrosalar: Exploiting Synchronized Clock Domains for Energy Efficient Multirate Embedded Systems</b>   | \$300K | Co-PI (PI Chong)                              |

### Gifts

| Years | Source   | Title   | Amount | Prin. Invest. |
|-------|----------|---|--------|---------------|
| 2014  | Raytheon | WiSH (Women in Software and Hardware) Support | \$500  | PI            |
| 2013  | NCWIT    | NCWIT Undergraduate Research Mentoring Award  | \$5K   | PI            |
| 2010  | Google   | Tutoring to Increase Diversity                | \$500  | PI            |

### Awards and Honors

NSF Future Directions in Computer Science Education – Part 2 participant, Spring 2014  
 Frontiers on Engineering Education, National Academy of Engineering, participant, Fall 2013  
 NCWIT Undergraduate Research Mentoring Award, 2012  
 Outstanding Faculty Member 2011 voted by graduating CS major seniors  
 Outstanding Faculty Member 2010 voted by graduating CS major seniors  
 Most Inspiring Professor – 2007 voted by all CPE majors  
 Nominated for SWE Most Supportive Professor Award, 2004, 2005, 2006  
 IEEE Outstanding Computer Engineering Instructor for 2003 school year voted by all CPE majors  
 IEEE Outstanding Professor, March 2003 nominated by CPE students

### Reviewing and Refereeing Activity

Program Committee member for Computing Frontiers '15  
 Technical Program Committee member for IPDPS 2015  
 Best Paper Award Committee member for PACT 2014  
 NSF CE21 Review Panel, 5/13  
 Technical Program Committee member for the Architectural and Microarchitectural Design track of DATE 2012  
 Technical Program Committee member for the Architectural and Microarchitectural Design track of DATE 2011  
 Program Committee Member for the 2011 International Conference on Supercomputing (ICS)  
 External Review Committee member for the 2010 International Symposium on Computer Architecture  
 Program Committee Member for the 2007, 2008, 2009 and 2010 Workshop on Computer Architecture Education  
 Program Committee Member for the 2009 Symposium on Microarchitecture

### Special Appointments (e.g., Editorships, Officer of Prof. Organization)

| Years   | Position         | Type of Service                                       |
|---------|------------------|---|
| 2015-16 | Co-General Chair | Southern California Celebration of Women in Computing |
| 2014-17 | Member           | Steering Committee, Computing Frontiers 2015          |
| 2014    | Co-Program Chair | Southern California Celebration of Women in Computing |
| 2014    | Co-Program Chair | Computing Frontiers 2014                              |
| 2008    | Program Chair    | 9th Workshop on Computer Architecture Education       |

### PART III. SERVICE

#### University Service (Including administrative posts held)

| <b>Years</b> | <b>Position</b>   | <b>Type of Service</b>  |
|--------------|-------------------|---|
| 2014         | Panelist          | UCSB Chancellor's Reception (Costa Mesa)                      |
| 2013-15      | Member            | Council on Diversity and Equity                               |
| 2008-15      | Member            | CS Undergraduate Affairs Committee                            |
| 2010-15      | Member            | CS Curriculum Committee                                       |
| 2008-13      | Chair             | CS Diversity Committee  |
| 2009-15      | Chair             | CS ABET Committee   |
| 2009-15      | Faculty Advisor   | WiSH faculty advisor  |
| 2009-10      | Member            | Committee on Undergraduate Academic Programs & Policy (CUAPP) |
| 2009-10      | Member            | Undergraduate Committee (UgC)                                 |
| 2010         | Chair             | ACM CS Faculty Tutoring Coordinator                           |
| 2008-09      | Member            | CS ABET Committee   |
| 2008-10      | Member            | CS Undergraduate Affairs Committee                            |
| 2009, 10     | Member            | Faculty Outreach Grant Review Committee                       |
| 2009         | Panelist          | UCSB Chancellor's Reception (LA)                              |
| 2009         | Panelist          | Teaching Panel for Postdoctoral Scholars                      |
| 2009         | Presenter         | Spring Insights CS Event                                      |
| 2008         | Presenter         | Mock Discussions for Teaching Assistant Training              |
| 2008         | Co-Chair          | CS Diversity Committee  |
| 2008         | Member            | CS ABET Committee   |
| 2008         | Member            | CS Undergraduate Affairs Committee                            |
| 2008         | Panelist          | UCSB Chancellor's Reception (LA, Costa Mesa)                  |
| 2008         | Speaker/Moderator | UCSB Spring Insight – CS Session                              |

#### Public Service (Including service to K-12 education)

| <b>Years</b> | <b>Position</b> | <b>Type of Service</b>  |
|--------------|-----------------|---|
| 2014-?       | Member          | CSTA Computational Thinking Task Force  |
| 2014-?       | Member          | 9-dots after-school program advisory board member                             |
| 2011-?       | Member          | ACCESS (Alliance for California Computing Education for Students and Schools) |

### PART IV. RESEARCH CONTRIBUTIONS

| <b>No.</b> | <b>Year</b> | <b>Title and Authors</b>   | <b>Publisher</b>  | <b>Category</b>           |
|------------|-------------|--|---|---------------------------|
| 1          | 1999        | "Cache Coherence in Page-Based Intelligent Memory," D. Keen (Franklin), F. T. Chong, M. Oskin, And J. Hensley.   | Eighth Workshop on Scalable Shared-Memory Multiprocessors held in conjunction with the 1999 International Symposium on Computer Architecture. | Refereed Workshop Paper   |
| 2          | 1999        | "Exploiting ILP in Page-Based Intelligent Memory," M. Oskin, J. Hensley, D. Keen (Franklin), F. T. Chong, M. Farrens, And A. Chopra.   | 32 <sup>nd</sup> Annual International Symposium on Microarchitecture (MICRO-32)   | Refereed Conference Paper |
| 2.5*       | 1999        | "FlexRAM: An Advanced Intelligent Memory System.", Yi Kang, Michael Huang, Seung-Moon Yoon, Zhengho Ge, Diana Keen (Franklin), Vinh Lam, Prattap Pattnaik and Josep Torrellas. | International Conference on Computer Design (ICCD).   | Refereed Conference Paper |

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|----|------|---|--|---------------------------|
| 3  | 1999 | “Active Page Architectures for Media Processing,” J. Hensley, M. Oskin, D. Keen (Franklin), And F. T. Chong.  | Workshop on Media Processors and DSPs, held with the 32nd Annual International Symposium on Microarchitecture.   | Refereed Workshop Paper   |
| 4  | 2000 | “Cache Coherence in Intelligent Memory Systems,” D. Keen (Franklin), M. Oskin, J. Hensley, And F. T. Chong.   | Workshop on Solving the Memory Wall Problem, held with the International Symposium on Computer Architecture.   | Refereed Conference Paper |
| 5  | 2000 | “Reducing Cost And Tolerating Defects in Page-Based Intelligent Memory,” M. Oskin, D. Keen (Franklin), J. Hensley, L. V. Lita, And F. T. Chong.   | International Conference on Computer Design.   | Refereed Conference Paper |
| 6  | 2000 | “Algorithmic Complexity with Page-Based Intelligent Memory,” M. Oskin, L. V. Lita, F. T. Chong, J. Hensley, And D. Keen (Franklin).   | Parallel Processing Letters  | Article                   |
| 7  | 2001 | “Memory Issues in Hardware-Supported Software Safety,” D. Keen (Franklin), F. Chong, P. Devanbu, M. Farrens, J. Brown, J. Hollfelder, And X.-T. Zhuang.   | Workshop on Memory Performance Issues, held in conjunction with the 28th Annual International Symposium on Computer Architecture                         | Refereed Workshop Paper   |
| 8  | 2002 | “IOP: A Preliminary Study of Instruction-Level Object Parallelism For Superscalars,” D. Keen (Franklin), And F. Chong.  | Workshop on Memory Performance Issues, held with the 29th International Symposium in Computer Architecture.  | Refereed Workshop Paper   |
| 9  | 2002 | “Operating Systems Techniques For Parallel Computation In Intelligent Memory,” M. Oskin, D. Keen (Franklin), J. Hensley, L. V. Lita, And F. T. Chong.   | Parallel Processing Letters  | Article                   |
| 10 | 2003 | “Cache Coherence in Intelligent Memory Systems,” D. Keen (Franklin), M. Oskin, J. Hensley, And F. T. Chong.   | IEEE Transactions on Computers   | Article                   |
| 11 | 2003 | “Synchroscale: Initial Design Lessons in Power-Aware Design of Tile-Based Embedded Architectures,” J. Oliver, R. Rao, P. Sultana, J. Crandall, E. Czernikowski, L. W. Jones, D. Copsey, D. Keen (Franklin), V. Akella, F. T. Chong. | Workshop on Power-Aware Computing Systems (PACS '03) held in conjunction with the International Symposium on Microarchitecture                           | Refereed Conference Paper |
| 12 | 2004 | “Synchroscale: A Multiple Clock Domain Power-Aware Tile-Based Embedded Processor,” J. Oliver, R. Rao, P. Sultana, J. Crandall, E. Czernikowski, L. Jones, D. Franklin, V. Akella, And F. T. Chong.                                  | International Symposium on Computer Architecture   | Refereed Conference Paper |
| 13 | 2004 | “Challenges in Reliable Quantum Computing,” D. Franklin And F. Chong.   | In Nano, Quantum and Molecular Computing: Implications to High Level Design and Validation. S. Shukla and I. Bahar, editors. Kluwer Academic Publishers. | Book Chapter              |
| 14 | 2005 | “Experiences with the Blackfin Architecture for Embedded Systems Education,” Diana Franklin and John Seng.  | In the Twelfth Workshop on Computer Architecture Education   | Refereed Workshop Paper   |
| 15 | 2005 | “Improving Non-Stationary Data Retrieval in Wireless Sensor Networks,” A. LeBeau, J. Fields, R. Lavering, D. Franklin and J. Seng.  | IEEE PerCom Workshop on Sensor Networks and Systems for Pervasive Computing  | Refereed Conference Paper |

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|----|------|---|---|---------------------------|
| 16 | 2005 | “Reliability Requirements of Control, Address and Data Operations in Error Tolerant Applications,” D. D. Thaker, D. Franklin, V. Akella and F. T. Chong.                  | Workshop on Architectural Reliability in conjunction with MICRO-38  | Refereed Conference Paper |
| 17 | 2005 | “Synchroscale: Evaluation of an Embedded, Multi-core Architecture for Media Applications,” J. Oliver, R. Rao, D. Franklin, V. Akella, and F. T. Chong.                    | Journal of Embedded Computing   | Article                   |
| 18 | 2006 | “Exploiting Non-Uniform Memory Access Patterns Through Bitline Segmentation,” Ravishankar Rao, Justin Wenck, Diana Franklin, Rajeevan Amirtharajah, and Venkatesh Akella. | In the Workshop on Memory Performance Issues, in conjunction with HPCA (High Performance Computer Architecture), February 2006. Chosen as one of 5 papers to be published in SIGMICRO newsletter. | Refereed Workshop Paper   |
| 19 | 2006 | “Segmented Bitline Cache: Exploiting Non-Uniform Memory Access Patterns,” Ravishankar Rao, Justin Wenck, Diana Franklin, Rajeevan Amirtharajah, and Venkatesh Akella.     | International Conference on High Performance Computing (HiPC)   | Refereed Conference Paper |
| 20 | 2006 | “Case Studies in Cost, Performance, and Reliability,” Diana Franklin.   | Computer Architecture - A Quantitative Approach - 4th edition by Hennessy and Patterson, Elsevier Publishers  | Book Chapter              |
| 21 | 2006 | “Tile Size Selection For Low-Power, Tile-Based Architectures,” J. Oliver, R. Rao, D. Franklin, V. Akella, and F. T. Chong.  | International Symposium on the Computing Frontiers (20% acceptance rate)  | Refereed Conference Paper |
| 22 | 2006 | “Characterization of Error-Tolerant Applications when Protecting Control Data,” D. Thaker, D. Franklin, J. Oliver, S. Biswas, D. Lockhart, T. Metodi, F. T. Chong.        | IEEE International Symposium on Workload Characterization   | Refereed Conference Paper |
| 23 | 2007 | “Gender Differences: Recognizing and Developing Potential in Female Students,” Diana Franklin.  | Computing Research News, March 2007, Vol. 19, No. 3   | Article                   |
| 24 | 2007 | “Tile Size Selection For Low-Power, Tile-Based Architectures,” J. Oliver, R. Rao, D. Franklin, V. Akella, and F. T. Chong.  | Transactions on High-Performance Embedded Architectures and Compilers   | Article                   |
| 25 | 2008 | “Active Pages: Memory-Centric Computation,” Diana Franklin.   | Chapter 6.10 of Reconfigurable Computing: The Theory and Practice of FPGA-Based Computation   | Book Chapter              |
| 26 | 2008 | “Efficient Fault Tolerance in Multi-media Applications through Selective Instruction Replication,” A. Sundarum, A. Akel, D. Lockhart, D. Thaker, and D. Franklin.         | Workshop on Radiation Effects and Fault Tolerance in Nanometer Technologies   | Refereed Workshop Paper   |
| 27 | 2008 | “Preliminary Experiments on Similar Executions with Reduced Off-Chip Accesses in Multi-core Processors,” S. Biswas, F. Chong, D. Franklin, and T. Sherwood.               | Workshop on Parallel Execution of Sequential Programs on Multi-core Architectures   | Refereed Workshop Paper   |
| 28 | 2008 | “Proceedings of the 9 <sup>th</sup> Workshop on Computer Architecture Education,” D. Franklin and E. Gehringer, eds.  | ACM   | Book                      |

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|----|------|---|--|---------------------------|
| 29 | 2009 | “Multi-Execution: Multicore Caching for Data-Similar Executions,” S. Biswas, D. Franklin, A. Savage, R. Dixon, T. Sherwood, F. Chong<br><a href="http://www.cs.ucsb.edu/~franklin/cv/pubs/isca142-biswas.pdf">http://www.cs.ucsb.edu/~franklin/cv/pubs/isca142-biswas.pdf</a> | International Symposium on Computer Architectures (ISCA'09)  | Refereed Conference Paper |
| 30 | 2009 | “Soft Coherence: Preliminary Experiments with Error-Tolerant Memory Consistency in Numerical Applications,” G. Long, F. T. Chong, D. Franklin, J. Gilbert, and D. Fan.  | Workshop on Chip Multiprocessor Memory Systems and Interconnects   | Refereed Workshop Paper   |
| 31 | 2009 | “PSMalloc: Content Based Memory Management for MPI Applications,” S. Biswas, D. Franklin, T. Sherwood, F. Chong, B. Supinski, M. Schulz   | MEDEA 2009 Workshop  | Refereed Workshop Paper   |
| 32 | 2009 | "Conflict-Avoidance in Multicore Caching for Data-Similar Executions," S. Biswas, D. Franklin, T. Sherwood, F. Chong  | International Symposium on Pervasive Systems, Algorithms, and Networks (I-SPAN 2009)                         | Refereed Conference Paper |
| 33 | 2010 | “eVoices: A Website Supporting Outreach by Attracting Target Groups to Computer Science through Culturally Relevant Themes,” S. Jones, A. Hernandez, P. Ortiz, P. Conrad, G. Aldana, D. Franklin.   | Conference of the Southwestern Region of the Consortium for Computing Sciences in Colleges (CCSC-SW 10)      | Refereed Conference Paper |
| 34 | 2010 | “A Case for Smartphone Reuse to Augment Elementary School Education ,” X. Li, P. Ortiz, J. Browne, D. Franklin, J. Oliver, R. Geyer, Y. Y. Zhou, and F. T. Chong.   | Work in Progress in Green Computing, held with the International Conference on Green Computing               | Refereed Workshop Paper   |
| 35 | 2010 | “Smartphone Evolution and Reuse: Establishing a more Sustainable Model,” X. Li, P. Ortiz, J. Browne, D. Franklin, J. Oliver, R. Geyer, Y. Y. Zhou, and F. T. Chong.   | International Workshop on Green Computing (GreenCom 2010)  | Invited Workshop Paper    |
| 36 | 2010 | “SBLLMalloc, Version 1,” Susmit Biswas, Diana Franklin, Timothy Sherwood, Frederic T. Chong, Bronis R. de Supinski, Martin Schulz.  | <a href="http://arch.cs.ucsb.edu/sbllmalloc">arch.cs.ucsb.edu/sbllmalloc</a>                                 | Software Release          |
| 37 | 2010 | "Minimal Multi-Threading: Finding and Removing Redundant Instructions in Multi-Threaded Processors,” Guoping Long, Diana Franklin, Susmit Biswas, Pablo Ortiz, Jason Oberg, Dongrui Fan , Frederic T. Chong   | International Symposium On Microarchitecture (MICRO)   | Refereed Conference Paper |
| 38 | 2011 | "Animal Tlatoque: Attracting Middle-School Students to Computing through Culturally-Relevant Themes," D Franklin, P Conrad, G Aldana, S Hough, N Avalos Cisneros, F Lopez, A Gonzalez, A Hernandez, S Jones, J Lopez, C Lu, N Moreno, P Ortiz, M Rochin, S Smith              | SIGCSE Technical Symposium   | Refereed Conference Paper |
| 39 | 2011 | Exercises for Chapter 1, Diana Franklin   | Computer Architecture - A Quantitative Approach - 5th edition by Hennessy and Patterson, Elsevier Publishers | Book Chapter              |
| 40 | 2011 | Exercises for Appendix C, Diana Franklin  | Computer Architecture - A Quantitative Approach - 5th edition by Hennessy and Patterson, Elsevier Publishers | Book Chapter              |

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|----|------|---|---|---------------------------|
| 41 | 2011 | “Exploiting Data Similarity to Reduce Memory Footprints,” Susmit Biswas, Bronis R. de Supinski, Martin Schulz, Diana Franklin, Tim Sherwood, Frederic T. Chong  | 25th IEEE International Parallel & Distributed Processing Symposium (IPDPS'11)  | Refereed Conference Paper |
| 42 | 2011 | “Mitigating the Environmental Impact of Smartphones with Device Reuse,” Xun Li, Pablo Ortiz, Brandon Kuczenski, Diana Franklin, and Frederic T. Chong.  | Sustainable Green Computing: Practices, Methodologies and Technologies  | Refereed Book Chapter     |
| 43 | 2011 | “Teaching-Oriented Faculty at Research Universities,” SIGCSE Teaching-Oriented Faculty Working Group (with contributions by Steve Wolfman, Owen Astrachan, Mike Clancy, Kurt Eiselt, Jeffrey Forbes, Diana Franklin, David Kay, Mike Scott, and Kevin Wayne)  | Communications of the ACM   | Journal                   |
| 44 | 2011 | “A Comprehensive Study of Reusing Smartphones to Augment Elementary School Education,” X. Li, P. Ortiz, J. Browne, D. Franklin, J. Oliver, R. Geyer, Y. Y. Zhou, and F. T. Chong.   | International Journal of Handheld Computing Research  | Refereed Journal Paper    |
| 45 | 2012 | “Barely Alive Memory Servers: Keeping Data Active in a Low-Power State,” V. Anagnaostopoulou, S. Biswas, H. Saadeldeen, A. Savage, R. Bianchini, T. Yang, D. Franklin, and F. T. Chong.   | ACM Journal on Emerging Technologies in Computing   | Refereed Journal Paper    |
| 46 | 2012 | “Power-aware Resource Allocation for CPU- and Memory-intense Internet Services,” V. Anagnaostopoulou, S. Biswas, H. Saadeldeen, R. Bianchini, T. Yang, D. Franklin, and F. T. Chong.  | International Workshop on Energy-Efficient Data Centres   | Refereed Workshop Paper   |
| 47 | 2013 | “Assessment of Computer Science Learning in a Scratch-Based Outreach Program,” Diana Franklin, Phillip Conrad, Bryce Boe, Katy Nilsen, Charlotte Hill, Michelle Len, Greg Dreschler, Gerardo Aldana, Paulo Almeida-Tanaka, Brynn Kiefer, Chelsea Laird, Felicia Lopez, Christine Pham, Jessica Suarez, Robert Waite | SIGCSE Technical Symposium  | Refereed Conference Paper |
| 48 | 2013 | “Hairball: Lint-inspired Static Analysis of Scratch Projects,” Bryce Boe, Charlotte Hill, Michelle Len, Greg Dreschler, Diana Franklin, Phillip Conrad,   | SIGCSE Technical Symposium  | Refereed Conference Paper |
| 49 | 2013 | “Practical Guide to Gender Diversity for Computer Science Faculty,” Diana Franklin<br><a href="http://www.morganclaypool.com/doi/abs/10.2200/S00495ED1V01Y201304PRO002">http://www.morganclaypool.com/doi/abs/10.2200/S00495ED1V01Y201304PRO002</a>   | Morgan-Claypool   | Edited Book               |
| 50 | 2013 | “Memristors for Neural Branch Prediction: A Case Study in Strict Latency and Write Endurance Challenges,” Hebatallah Saadeldeen, Diana Franklin, Guoping Long, Charlotte Hill, Aisha Browne, Dmitri Strukov, Timothy Sherwood and Frederic Chong  | Computing Frontiers Harbinger award (best paper)  | Refereed Conference Paper |
| 51 | 2013 | “Optimized Code for a Solovay-Kitaev Quantum Rotation Generator,” Daniel Kudrow, Kenneth Bier, Zhaoxia Deng, Diana Franklin, and Frederic T. Chong.   | <a href="http://www.cs.ucsb.edu/~dkudrow/downloads/skoptimized.tar.gz">http://www.cs.ucsb.edu/~dkudrow/downloads/skoptimized.tar.gz</a> | Software release          |
| 52 | 2013 | “Barely Alive Servers: Greener Datacenters Through Memory-Accessible, Low-Power States,” Vlasia Anagnostopoulou, Susmit Biswas, Heba Saadeldeen, Alan Savage, Ricardo Bianchini, Tao Yang, Diana Franklin and Frederic T. Chong.  | Sustainable Green Computing Systems; Springer Verlag Publishers   | Refereed Book Chapter     |



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|------------|------|--|---|---------------------------|
| 53         | 2013 | “Quantum Rotations: A Case Study in Static and Dynamic Machine-Code Generation for Quantum Computers,” Daniel Kudrow, Kenneth Bier, Zhaoxia Deng, Diana Franklin, Yu Tomita, Kenneth Brown, and Frederic T. Chong                    | International Symposium on Computer Architecture  | Refereed Conference Paper |
| 54         | 2013 | “Computational Thinking for Physics: Programming Models of Physics Phenomenon in Elementary School,” Hilary Dwyer, Bryce Boe, Charlotte Hill, Diana Franklin, and Danielle Harlow  | Physics Education Research Conference (PERC)  | Refereed Conference Paper |
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